Actuaries Abroad

California Actuarial Student Summit 2019
UC Santa Barbara

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Senior Director, International, SOA

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Discussion topics

- Global actuarial profession
- Becoming an actuary & SOA pathway
- Working internationally: qualifications & job market
Around the Globe – Snapshot

Global Actuarial Profession (Total ~80,000)

- North America: 44%
- Europe: 38%
- Asia: 8%
- Oceania: 4%
- Latin America: 3%
- Africa: 2%
- Middle East: 0%

Estimated results based on 2018 Intl. Actuarial Association (IAA) data; distributions are approximate due to potential overlap in membership in different regions.
Around the Globe – Snapshot

**SOA Global Footprint (2018)**

- United States: 20,560
- Canada: 6,944
- China: 3,048
- Asia-Pacific: 2,211
- Latin America: 1,261
- Rest of the World: 5,213

Members: 31,325

**CAS Global Footprint (2018)**

- US: 135
- Canada: 105
- Bermuda: 79
- China/HK/Singapore: 903

Members: 8,352

**SOA Members + Candidates in Asia (2018)**

- China: 30%
- Hong Kong: 20%
- Malaysia: 11%
- Korea, Republic of: 11%
- Taiwan: 11%
- Thailand: 11%
- Singapore: 5%
- Philippines: 4%
- Vietnam: 4%
- Japan: 4%
- Indonesia: 2%
- Rest of the World: 1%

**IFoA Global Footprint (2017/18)**

- UK: 538
- India: 559
- Ireland: 1185
- South Africa: 1636
- China: 6064
- ROW: 16,253

Includes both Actuaries (~15,000) + Students (~16,000) = ~31,000
Becoming an actuary & SOA pathway
Becoming an Actuary – 4 Primary Intl. Credentials

**SOA (US)—ASA, FSA**
- Practice Areas: All covered
- Choose specialty track after obtaining ASA
- Self-study or university curriculum to master actuarial concepts
- Advance through series of exams to earn credential
- Complete/attend certain modules/courses
  
  [https://www.soa.org/education/general-info/default/](https://www.soa.org/education/general-info/default/)

**CAS (USA)—ACAS, FCAS**
- Practice Area: Property & Casualty
- Self-study or university curriculum to master concepts
- University and exam pathways
- Advance through a series of exams to earn credential
- Complete/attend certain modules/courses
  
  [https://www.casact.org/admissions/process/](https://www.casact.org/admissions/process/)
Becoming an Actuary – 4 Primary Intl. Credentials

IFoA (UK)— AIA, FIA
- Practice areas: All Covered
- Register as a Student Member
- Advance through series of exams to earn credential
- Complete/attend certain modules/courses
- Meet work-based requirement
  https://www.actuaries.org.uk/become-actuary/how-become-actuary

AI (Australia)— AIAA, FIAA
- Practice areas: Enterprise Risk Management, General Insurance, Life Insurance & Wealth Management
- Hybrid of university courses, online modules & examinations
- In transition with credentialing system
- Meet work-based requirement
ASA Pathway

**INTRODUCTORY I**
- **VEE** Economics
- **VEE** Accounting and Finance
- **Exam** Financial Mathematics
- **Exam** Probability

**INTRODUCTORY II**
- **Exam** Investment and Financial Markets
- **Exam** Mathematical Statistics

**ACTUARIAL**
- **Exam** Long-Term Actuarial Mathematics
- **Exam** Short-Term Actuarial Mathematics
- **Exam** Statistics for Risk Modeling

**ADVANCED**
- **e-Learning** Fundamentals of Actuarial Practice
- **Project** Predictive Analytics

**PROFESSIONALISM**
- **Seminar** Associateship Professionalism Course
FSA Pathway

CURRENT ASA REQUIREMENTS

<table>
<thead>
<tr>
<th>EXAM</th>
<th>CORPORATE FINANCE AND ERM</th>
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</thead>
<tbody>
<tr>
<td>VEE</td>
<td>QUANTITATIVE FINANCE AND INVESTMENT</td>
</tr>
<tr>
<td>e-LEARNING</td>
<td>INDIVIDUAL LIFE INSURANCE AND ANNUITIES</td>
</tr>
<tr>
<td>PROJECT</td>
<td>RETIREMENT BENEFITS</td>
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<tr>
<td>SEMINAR</td>
<td>GROUP AND HEALTH INSURANCE</td>
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<td></td>
<td>GENERAL INSURANCE</td>
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</tbody>
</table>

FSA SPECIALTY TRACKS

<table>
<thead>
<tr>
<th>DMAC</th>
<th>FAC</th>
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</thead>
</table>

SOCIETY OF ACTUARIES
SOA Pathway - International Context

• FAP E-Learning Module
• Changes to start in Jan 2020
• Emphasis on real-life interactive scenarios and skill-building activities
• Expanded guidance on communication skills
• Broader international scope
• Cases and examples from the country where candidate work/study
Where SOA exams are administered

<table>
<thead>
<tr>
<th>Top Exam Centers in 2018</th>
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</thead>
<tbody>
<tr>
<td>Toronto, ON</td>
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<tr>
<td>Seoul, Korea</td>
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<tr>
<td>New York, NY</td>
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<tr>
<td>Chicago, IL</td>
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<tr>
<td>Montreal, PQ</td>
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<tr>
<td>Beijing, China</td>
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<tr>
<td>Kuala Lumpur, Malaysia</td>
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<tr>
<td>Taipei, Taiwan</td>
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<tr>
<td>Hong Kong</td>
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<td>Minneapolis, MN</td>
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<tr>
<td>Philadelphia, PA</td>
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<tr>
<td>Shanghai, China</td>
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<tr>
<td>Newark, NJ</td>
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<tr>
<td>Hartford, CT</td>
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<tr>
<td>Boston, MA</td>
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</tbody>
</table>
Working internationally: qualifications & job market
Becoming an Actuary in Asia

• Most local associations recognize global credentials
• Many markets require passing local actuarial exam(s)
• Some differences, for example:
  • South Korea & Indonesia—must belong to local association and pass local exam(s)
  • Malaysia requires work experience at a local company before becoming a Qualified Actuary
  • Hong Kong & Singapore fully derivative
  • India requires local designation to practice
Becoming an Actuary in China

• International Fellows must pass the “Chief Actuary Qualification Exam” based on Chinese regulations to be a Qualified Actuary
• China Association of Actuaries (CAA) Fellows do not need to take above exam
• University & exam pathway
• Recognized credentials: SOA, IFoA, CAS, AI (Aust)
• Chinese language is a must
  
  https://www.e-caa.org.cn/englishIndex
<table>
<thead>
<tr>
<th>Local Association</th>
<th>Exam</th>
<th>Fully Derivative</th>
<th>Derivative + Exam</th>
<th>Additional Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actuarial Society of Hong Kong</strong></td>
<td></td>
<td>SOA, CAS, IFoA, AI (Aust)</td>
<td>SOA – Life</td>
<td>Must be nominated by a fellow member</td>
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<td></td>
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<td>Life AI – Life</td>
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<td></td>
<td></td>
<td></td>
<td>IAJ - Life</td>
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<tr>
<td><strong>Taiwan – The Actuarial Institute of Chinese Taipei (AICT)</strong></td>
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<td>Requires work experience before applying for fellowship</td>
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<tr>
<td><strong>Singapore Actuarial Society</strong></td>
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<td>SOA, CAS, CIA IFoA, AI (Aust)</td>
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<tr>
<td><a href="https://www.actuaries.org.sg/">https://www.actuaries.org.sg/</a></td>
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<tr>
<td><strong>Actuarial Asociación de Malaysia</strong></td>
<td></td>
<td>SOA, CAS, CIA IFoA, AI (Aust)</td>
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<td>• At least 1 yr work exp</td>
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<tr>
<td><a href="https://actuaries.org.my/">https://actuaries.org.my/</a></td>
<td></td>
<td></td>
<td></td>
<td>• Country resident or familiar with labor conditions</td>
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<td>• Recommended by 2 fellow members</td>
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## Qualifications in Asia Pacific

<table>
<thead>
<tr>
<th>Local Association</th>
<th>Exam</th>
<th>Fully Derivative</th>
<th>Derivative + Exam</th>
<th>Additional Requirements</th>
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</thead>
<tbody>
<tr>
<td>Society of Actuaries of Indonesia (PAI)</td>
<td>Exclusive</td>
<td></td>
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<td>Foreign actuary may be Appointed Actuary if</td>
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<tr>
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<td>- At least 2 years work experience</td>
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<td>- Is a member with good standing of an IAA member association</td>
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<td>- Contribute to local association</td>
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<tr>
<td>The Institute of Actuaries of Korea</td>
<td>Two exams required</td>
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<td></td>
<td>- Certified Actuary need some work experience</td>
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<td></td>
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<td></td>
<td>- Certified Senior Actuary needs at least 10 yrs. work experience</td>
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<tr>
<td>The Society of Actuaries of Thailand</td>
<td></td>
<td>SOA, CAS, CIA, IFoA, AI (Aust)</td>
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</tbody>
</table>
Job market in Asia Pacific

- Shortage of GI actuaries across the regions
- **Hong Kong** insurance companies have high demand for graduates
- **Taiwan** insurance companies have high demand for interns for big data/modelling (research) projects
- Markets like **Malaysia & South Korea** usually prefer actuaries with some years of experience
Job market in China

- Insurance market is fast growing providing many job opportunities: 85% work in the insurance industry
- 70% work in traditional actuarial areas
- Highly dynamic and energetic
- Expect to multitask and a quick growth with steep learning curve
- Must speak the language
- Lots of regulatory changes
Getting a job in Asia

Entry-level Jobs
- Good college degree + several actuarial exams
- Soft skills are very important and in high demand

Experienced hires
- Overseas actuaries consider starting at an international company vs. pure domestic
- In high demand specialty when paired with good soft skills

Raise your Profile
- Internship before graduation
- Improve communication skills – can’t emphasize enough
- Advance computer skills – go beyond the basics
My international story...

- Grew up in Taiwan
- Attended college in Indiana
- Pension actuary / consultant for global firm (Chicago) w/ 3 year expat assignment in Switzerland
- Staff Fellow, Retirement at SOA
- Senior Director, International at SOA
A Good Actuary Has...

- Strong analytical problem solving skills
- Math & numeracy skills
- Advanced computer (beyond Excel & Access) such as SQL, Python, or R.
- Strong soft skills (in high demand)
- Ability to communicate complex concepts
- Good business acumen
- Project management skills
- Strong code of ethics
Discussion
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